CHIRURGIA ONCOLOGICA PER IL CHIRURGO D'URGENZA

SICUT
Società Italiana di Chirurgia d'Urgenza e del Trauma

Il cancro dello stomaco perforato/sanguinante

Prof. Giovanni de Manzoni

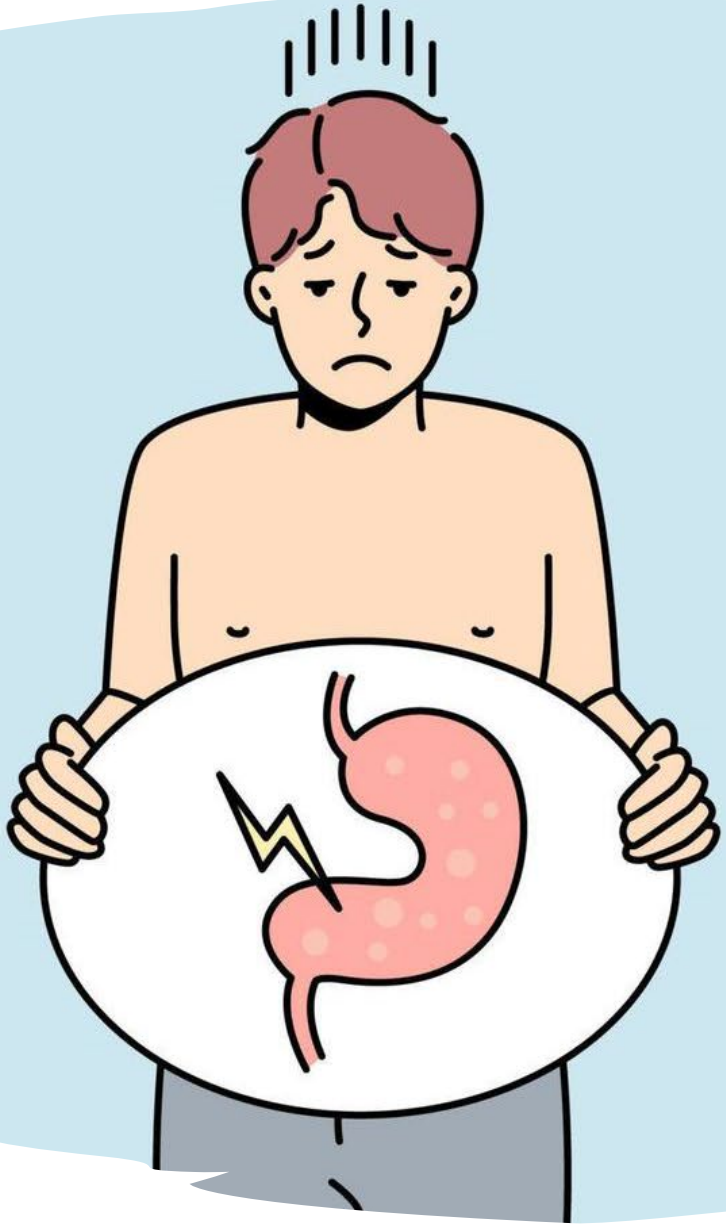
Chirurgia generale e dell'esofago e dello stomaco

Università di Verona

CONGRESSO NAZIONALE
SICUT 2025

PERFORATED GASTRIC CANCER

SEPTIC PATIENT



BLEEDING GASTRIC CANCER

HEMORRHAGIC PATIENT

PERFORATED GASTRIC CANCER

It is a **rare condition,** accounting for 0.3-3% of gastric cancer cases

...BUT...gastric cancer is present in **10-16%** of patients presenting with gastric perforation

Emergency condition of peritonitis

Oncologic technical aspects of surgery

Emergency presentation of the gastric cancer; prognosis and implications for service planning. World J Emerg Surg. 2012
Two-stage radical gastrectomy for perforated gastric cancer. EJSO 2000

PERFORATED GASTRIC CANCER

World Journal of Surgical Oncology

BioMed Central

Research

Open Access

Perforated gastric carcinoma: a report of 10 cases and review of the literature

Franco Roviello*[1], Simone Rossi[1], Daniele Marrelli[1], Giovanni De Manzoni[2], Corrado Pedrazzani[2], Paolo Morgagni[3], Giovanni Corso[1] and Enrico Pinto[1]

World Journal of Surgical Oncology, 2006

GIRCG

Gruppo Italiano Ricerca Cancro Gastrico

Retrospective analysis of 2564 consecutive cases of gastric cancer operated in 3 Centers belonging to the **Italian Research Group for Gastric Cancer**

10 cases of perforation → incidence rate was **0.39%**

Stage of disease		
I	1/10	
II	2/10	
III	3/10	
IV	4/10	
Surgery		
Gastrectomy	6/10	(mortality 17%)
Local repair	4/10	(mortality 75%)
Lymph node dissection		
Extended (D2, D3)	2/6	
Limited (D0, D1)	4/6	

World Journal of Surgical Oncology

BioMed Central

Research

Open Access

Perforated gastric carcinoma: a report of 10 cases and review of the literature

Franco Roviello*[1], Simone Rossi[1], Daniele Marrelli[1], Giovanni De Manzoni[2], Corrado Pedrazzani[2], Paolo Morgagni[3], Giovanni Corso[1] and Enrico Pinto[1]

World Journal of Surgical Oncology, 2006

Reference	N° patients	Incidence (%)	Preoperative diagnosis (%)	N° Repair surgery	N° Gastrectomy	Mortality (%) Repair	Mortality (%) Gastrectomy
Aird 1935[24]*	38	-	7.5	31	7	22 (71)	0
McNealy 1938[4]*	63	4.0	33.8	47	7	39 (82)	2 (29)
Casberg 1940[31]	5	2.4	0	5	0	4(80)	-
Bisgard 1945[5]*	115	2.8–6.0	3.2	80	15	59(74)	2(13)
Larmi 1962[13]	19	3.0	42.1	16	4	8(50)	0
Wilson 1966[12]	14	1.2	30.8	5	5	0	0
Cortese 1972[11]	13	0.6	40.0	11	2	3(27)	0
Stechenberg 1981[3]	9	3.9	0	7	2	2(29)	0
Siegert 1982[32]	4	2.3	25	0	4	-	0
Miura 1985[20]	9	0.6	33.3	1	8	-	-
Gertsch 1995[10]	34	-	29.4	4	30	2(50)	5(17)
Adachi 1997[1]*	155	0.5–3.6	34.7	27	128	19(70)	9(7)
Lehnert 2000[9]	23	1.8	39.1	12†	11	1(8)	2(18)
Kasakura 2002[2]	16	0.7	31.2	2‡	14	1(50)	1(7)
Ozmen 2002[25]	14	3.0	35.7	3§	11‡	1(33)	4(36)
IRGGC 2005	10	0.4	30.0	4	6	3(75)	1(17)

GIRCG
Gruppo Italiano Ricerca Cancro Gastrico

From the first study in 1935 until the early 1980's:

- the most frequent type of operation performed was the **simple closure or the omental patch**, sometimes associated with gastroenteroanastomosis.
- High surgery-related mortality of this type of surgery (also due to the different kind of patients who undergo this type of minimal surgery: frail patients or in advanced unresectable tumors)

Over the years the resection rate has been increasing and **the overall mortality rate has been decreasing.**

PERFORATED GASTRIC CANCER

World Journal of Surgical Oncology

BioMed Central

Research

Open Access

Perforated gastric carcinoma: a report of 10 cases and review of the literature

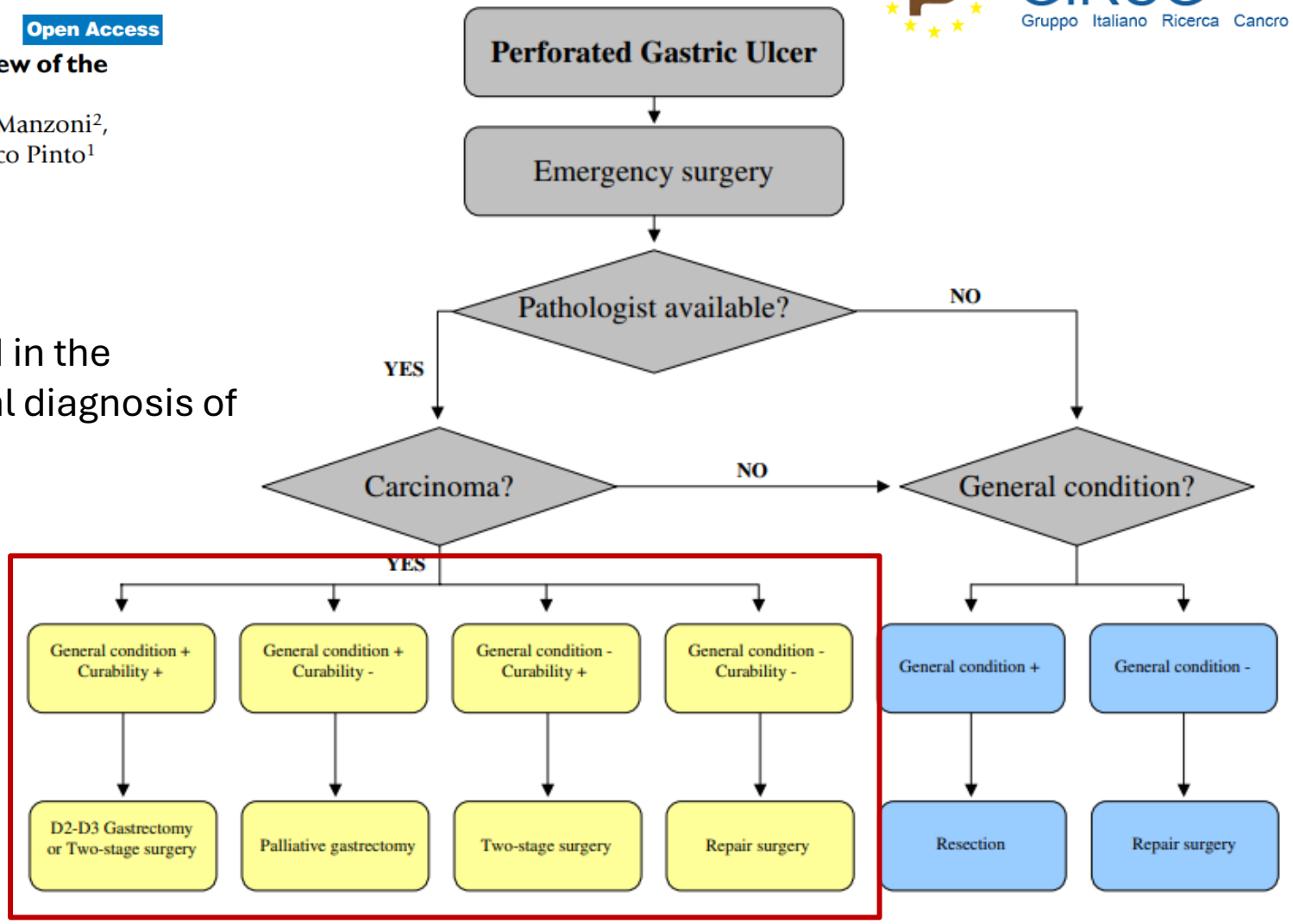
Franco Roviello*[1], Simone Rossi[1], Daniele Marrelli[1], Giovanni De Manzoni[2], Corrado Pedrazzani[2], Paolo Morgagni[3], Giovanni Corso[1] and Enrico Pinto[1]

World Journal of Surgical Oncology, 2006

The most important factors to be recalled in the management of a patient with histological diagnosis of perforated gastric carcinoma are:

1) the presence of preoperative shock
2) the gravity of peritonitis;
3) the curability of the neoplasm;
4) eventual comorbidities of the patient.

GIRCG
Gruppo Italiano Ricerca Cancro Gastrico



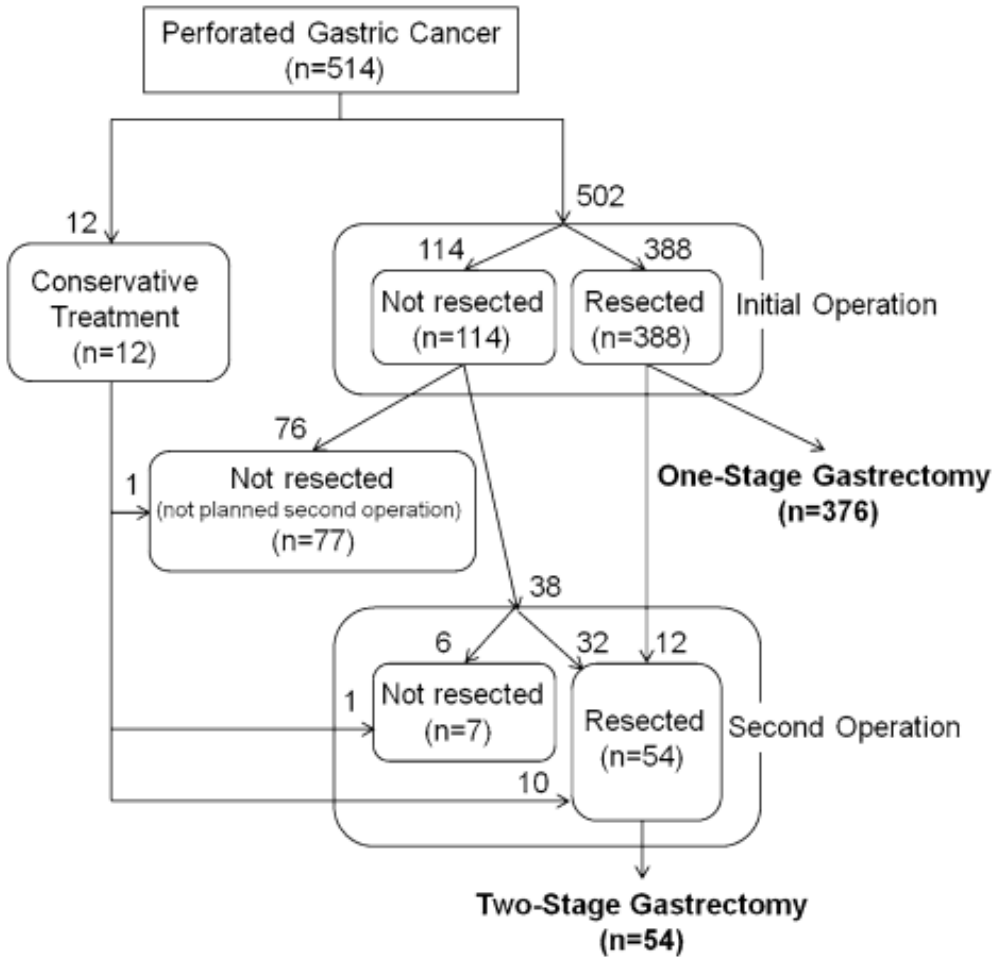
Gastric Cancer (2014) 17:578–587
DOI 10.1007/s10120-013-0308-0

ORIGINAL ARTICLE

The best surgical approach for perforated gastric cancer: one-stage vs. two-stage gastrectomy

Tatsuo Hata · Naoaki Sakata · Katsuyoshi Kudoh · Chikashi Shibata · Michiaki Unno

One-stage gastrectomy VS **Two-stage gastrectomy**



More advanced tumour in one-stage gastrectomy

Better quality of lymphadenectomy, curability and LOWER mortality in two-stage group

Table 1 Characteristics of the cases with perforated gastric cancer

Characteristics	One-stage gastrectomy [% (number of patients)]	Two-stage gastrectomy [% (number of patients)]	*p* value
T-factor			
T1	9.6 (33/346)	25.9 (14/54)	0.010
T2	30.9 (107/346)	35.2 (19/54)	
T3	49.4 (171/346)	31.5 (17/54)	
T4	10.1 (35/346)	7.4 (4/54)	
P-Factor			
P0	76.5 (238/311)	86.3 (44/51)	0.071
P1	23.5 (73/311)	13.7 (7/51)	
Stage			
I	18.5 (60/324)	35.3 (18/51)	<0.001
II	8.6 (28/324)	21.6 (11/51)	
III	33.0 (107/324)	19.6 (10/51)	
IV	39.9 (129/324)	23.5 (12/51)	
Lymph node dissection			
D0	37.3 (100/268)	10.0 (5/50)	<0.001
D1	34.0 (91/268)	18.0 (9/50)	
D2, D3	28.7 (77/268)	72.0 (36/50)	
Curability			
Curative (R0)	50.0 (136/272)	78.4 (40/51)	<0.001
Non-curative (R1, R2)	50.0 (136/272)	21.6 (11/51)	
Postoperative Mortality	11.4 (42/376)	1.9 (1/54)	0.010

What about survival?

Most important goal for perforated gastric cancer is to **achieve curative R0 resection**, regardless of whether the surgical approach is a one-stage or two-stage gastrectomy.

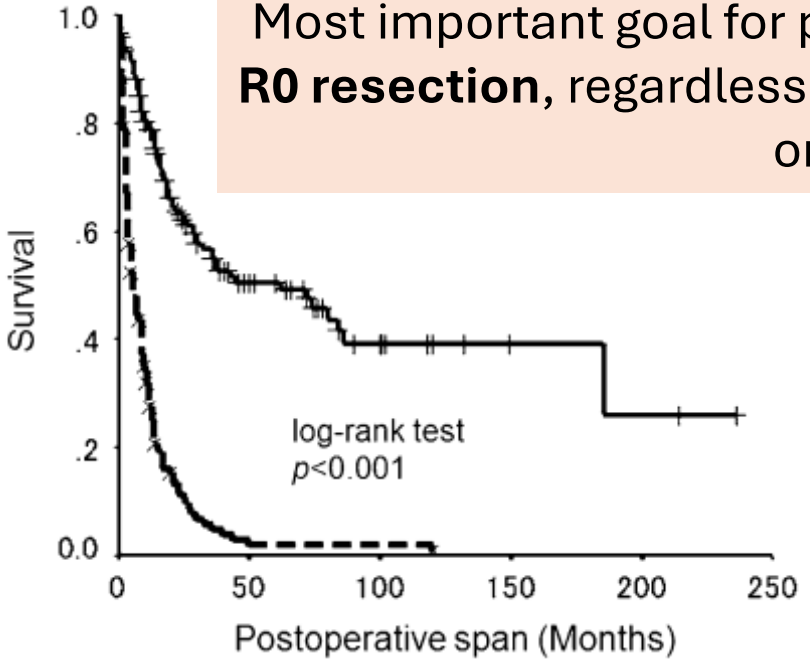


Fig. 2 Survival curve for patients who underwent curative (R0) or non-curative (R1 and 2) resection, including both one-stage and two-stage gastrectomy

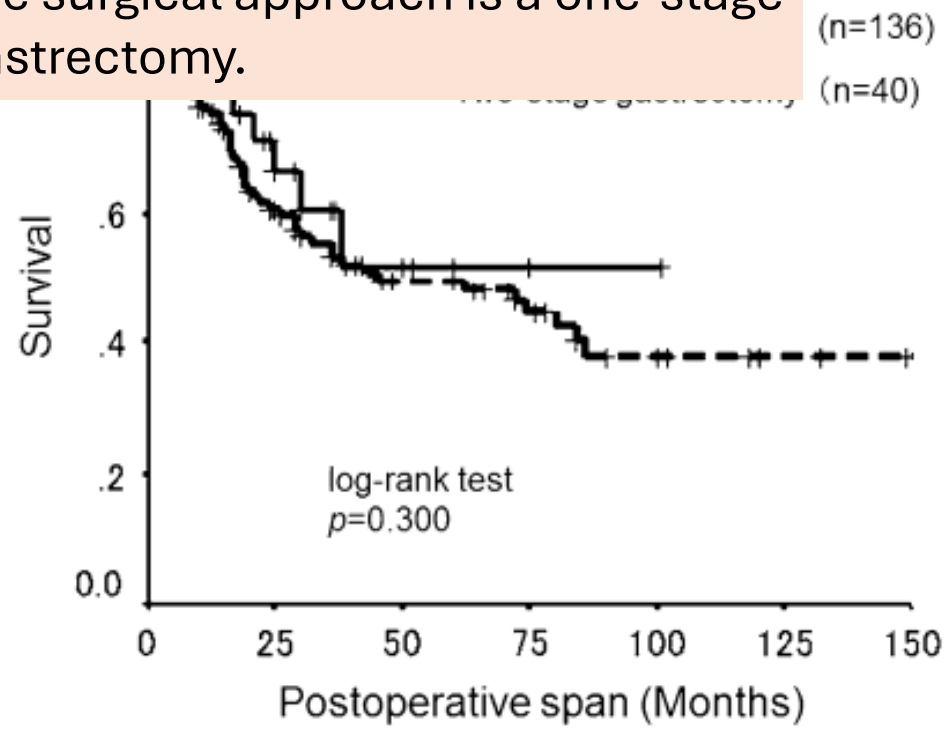


Fig. 3 Survival curve for patients who only underwent R0 resection with one-stage and two-stage gastrectomy

Survival curve for patients who underwent curative (R0) or non-curative (R1 and 2) resection, **<u>including both one-stage and two-stage gastrectomy</u>**

Gastric Cancer (2014) 17:578–587
DOI 10.1007/s10120-013-0308-0

ORIGINAL ARTICLE

The best surgical approach for perforated gastric cancer: one-stage vs. two-stage gastrectomy

Tatsuo Hata · Naoaki Sakata · Katsuyoshi Kudoh · Chikashi Shibata · Michiaki Unno

Most important goal for perforated gastric cancer is to **achieve curative R0 resection**, regardless of whether the surgical approach is a one-stage or two-stage gastrectomy.

ONE-STAGE GASTRECTOMY

- ✓ when gastric cancer can be diagnosed **before or at surgery**
- ✓ in cases with **limited peritonitis that can be expected to achieve curative R0** resection.

TWO-STAGE GASTRECTOMY

- ✓ If curative R0 resection cannot be expected due **to diffuse peritonitis**, it is important to **avoid non-curative and palliative gastrectomy** and plan treatment only for the peritonitis at the initial surgery

Some patient characteristics were not equally distributed between the one-stage and two-stage gastrectomy groups. The one-stage gastrectomy group included **older patients**, with more invasive tumor depth, and **more advanced staging** than the two-stage group

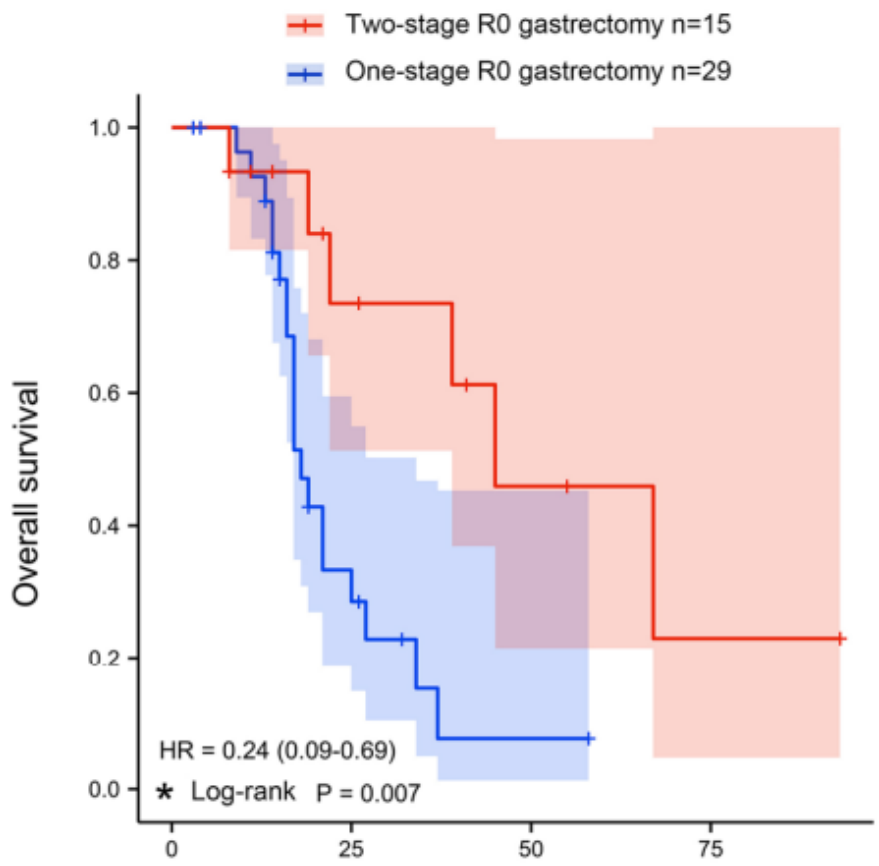
Zhang et al.
World Journal of Surgical Oncology (2024) 22:7
https://doi.org/10.1186/s12957-023-03283-4

World Journal of
Surgical Oncology

RESEARCH Open Access

Short-and long-term outcomes of one-stage versus two-stage gastrectomy for perforated gastric cancer: a multicenter retrospective propensity score-matched study

Junling Zhang[1†], Kexuan Li[2†], Zongnai Zhang[3], Guochao Zhang[4], Shupeng Zhang[5], Yinming Zhao[6], Zhaoya Gao[7], Haiyun Ma[8], Yong Xie[9], Jinsheng Han[10], Li Zhang[11], Baoliang Zhang[12], Yang Liu[13], Tao Wu[1], Yingchao Wu[1*], Yi Xiao[2*] and Xin Wang[1*]



81 PGC patients from 13 medical institutions were retrospectively enrolled in this study.
The PGC patients **who underwent R0** gastrectomy were divided into **one-stage surgery and two-stage surgery groups.**
415 regular gastric cancer patients without perforation were randomly selected as a control.

Patients **in the two-stage group** (median OS time is 45 months) had **significantly better overall survival than those in the one-stage group** (median OS time is 11 months, P=0.007)

Zhang et al.
World Journal of Surgical Oncology (2024) 22:7
https://doi.org/10.1186/s12957-023-03283-4

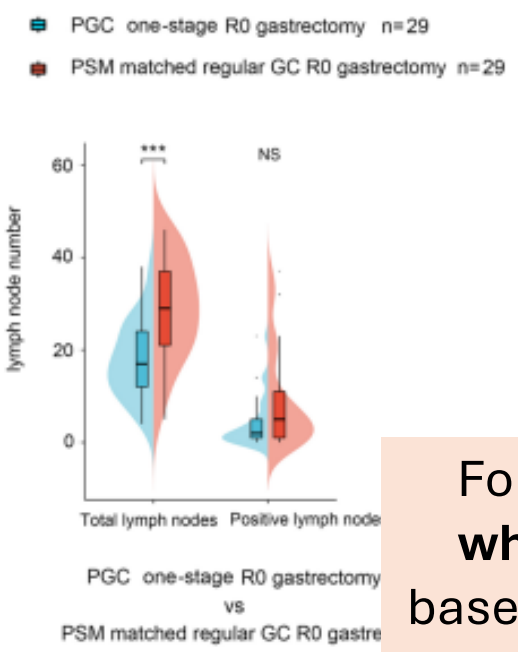
World Journal of
Surgical Oncology

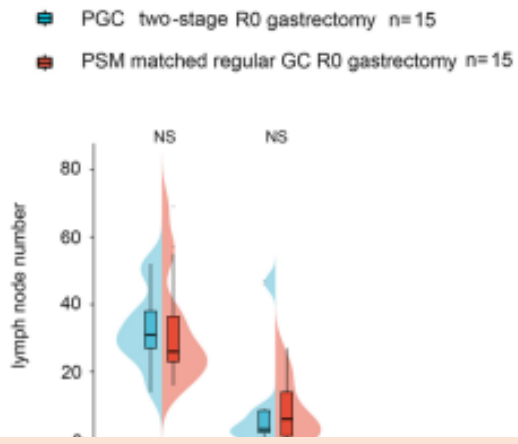
RESEARCH Open Access

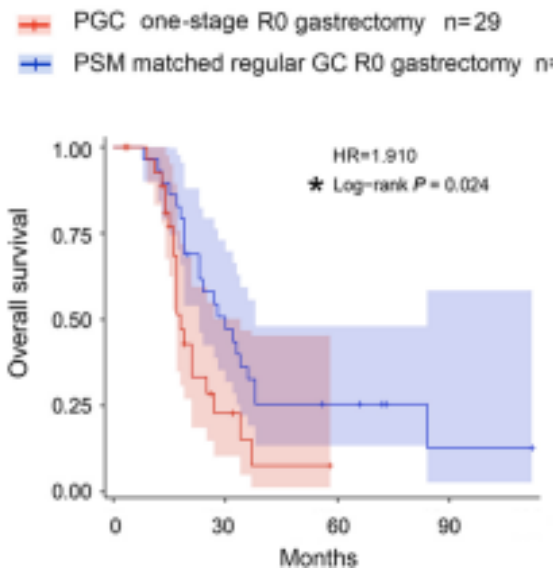
Short-and long-term outcomes of one-stage versus two-stage gastrectomy for perforated gastric cancer: a multicenter retrospective propensity score-matched study

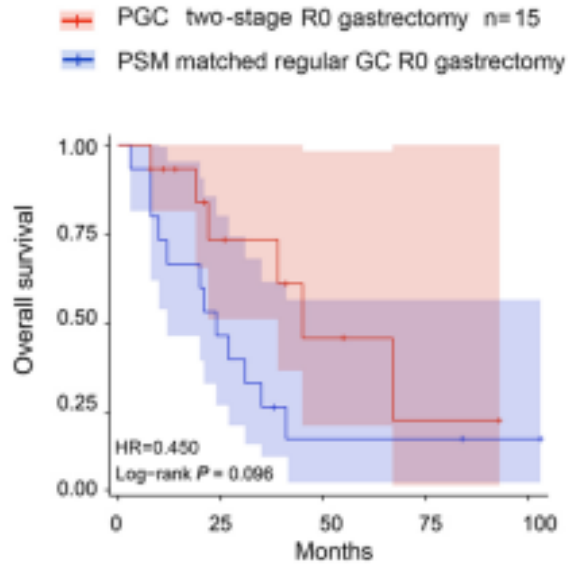
Junling Zhang[1†], Kexuan Li[2†], Zongnai Zhang[3], Guochao Zhang[4], Shupeng Zhang[5], Yinming Zhao[6], Zhaoya Gao[7], Haiyun Ma[8], Yong Xie[9], Jinsheng Han[10], Li Zhang[11], Baoliang Zhang[12], Yang Liu[13], Tao Wu[1], Yingchao Wu[1*], Yi Xiao[2*] and Xin Wang[1*]

Compared with propensity score-matched regular GC patients without perforation, PGC patients **who underwent one-stage gastrectomy** had a **poorer quality of lymphadenectomy** [17 (12, 24) vs 29 (21, 37), and suffered a **worse OS** (Median OS: 18 months vs 30 months, P=0.024









PGC one-stage R0 gastrectomy
vs
PSM matched regular GC R0 gastre

For PGC patients in poor condition, **two-stage treatment is a better option when D2 radical gastrectomy cannot be achieved in emergency surgery**, based on findings that two-stage gastrectomy could provide PGC patients with a better quality of lymphadenectomy and a better OS.

eve a
06) and a
core-

PERFORATED GASTRIC CANCER

Patient's hemodynamic stabilization (fluid, antibiotics, eventually amine support…)

+

Evaluate patients' general conditions, grade of peritoneal contamination, if a pre- or intra-operative suspected diagnosis of malignancy is available

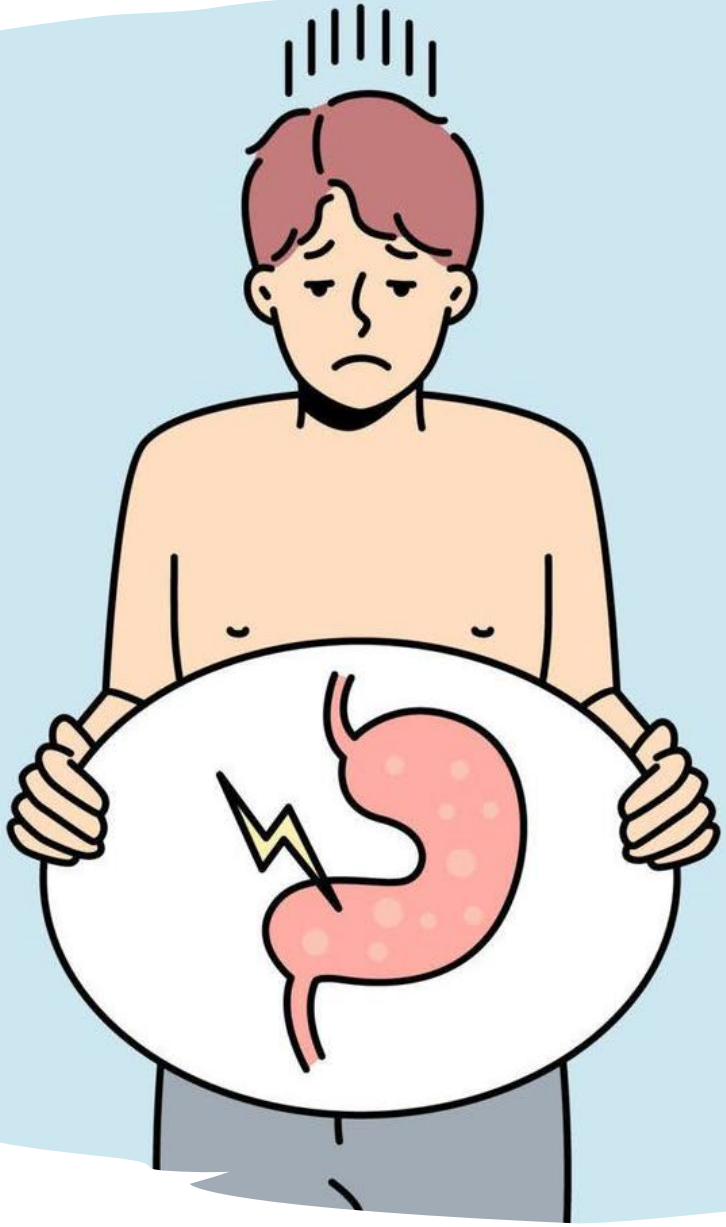
Whenever it's possible

If **M+**, prefer 'stomach preserving' strategy if possible

TWO-STAGE GASTRECTOMY
Damage control
+
Gastrectomy + adequate lymphadenectomy

PERFORATED GASTRIC CANCER

SEPTIC PATIENT



BLEEDING GASTRIC CANCER

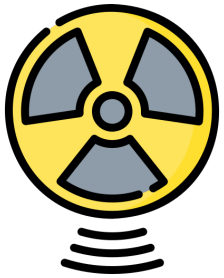
HEMORRHAGIC PATIENT

BLEEDING GASTRIC CANCER

Prevalence of bleeding in gastric cancer patients is **estimated to be 1–8%,** necessitating prompt and effective hemostatic intervention

SURGERY

RADIOTHERAPY



EMBOLIZATION

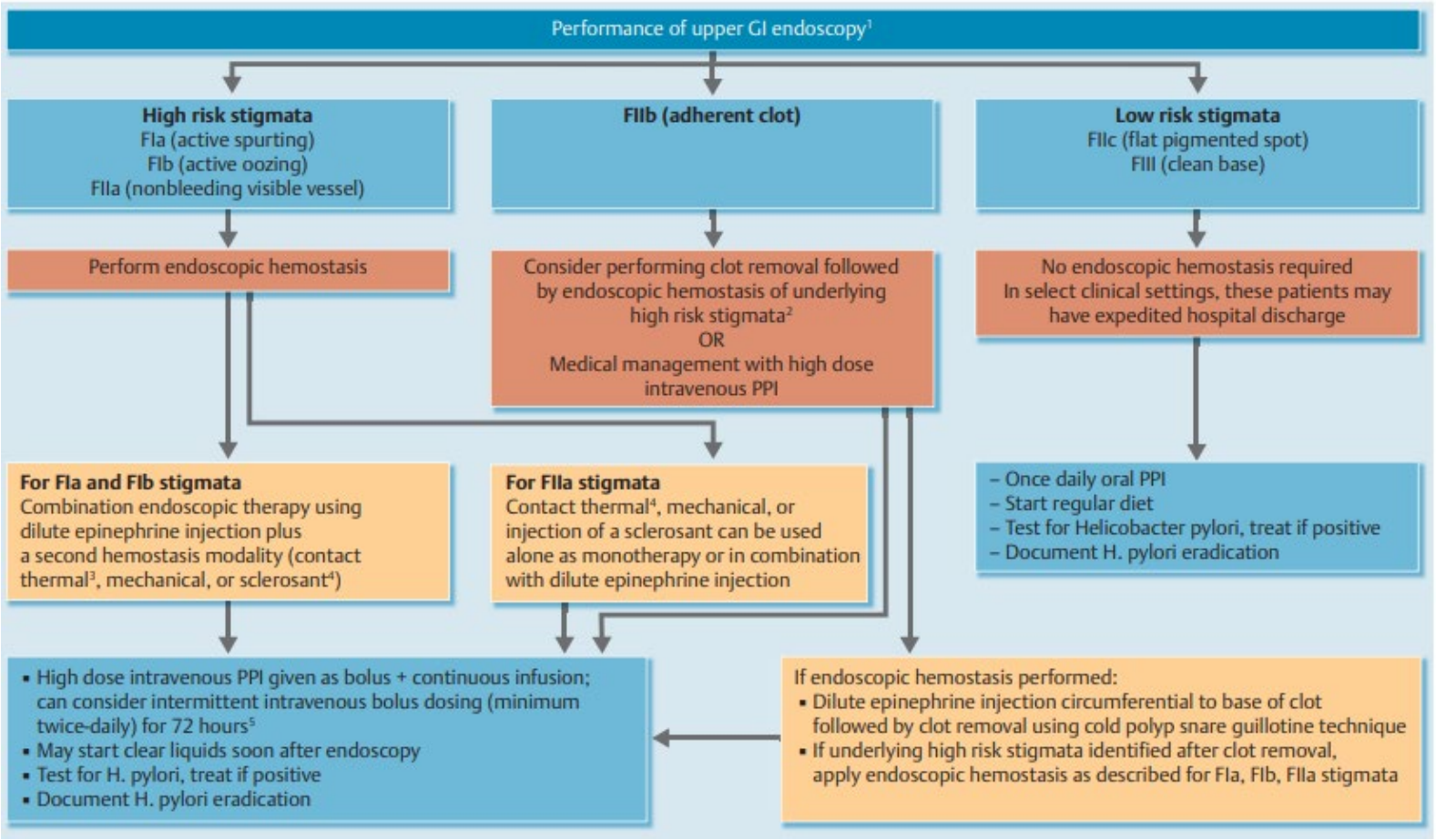
ENDOSCOPIC

Severe upper gastrointestinal tumor bleeding: endoscopic findings, treatment, and outcome. End,1996.
Endoscopic evaluation of 125 cases of upper gastrointestinal bleeding. Ann Surg,1981.
Management of bleeding from unresectable gastric cancer. Biomedicines, 2019

BLEEDING GASTRIC CANCER

Diagnosis and management of nonvariceal upper gastrointestinal hemorrhage: European Society of Gastrointestinal Endoscopy (ESGE) Guideline

ESGE



Following hemodynamic resuscitation, it is recommended

- **EARLY (≤24 hours) upper GI endoscopy**.
- **VERY EARLY (< 12 hours)** upper GI endoscopy may be considered in patients with **high risk clinical features** (hemodynamic instability that persists despite ongoing attempts at volume resuscitation; in-hospital bloody emesis/nasogastric aspirate; or contraindication to the interruption of anticoagulation)

Original article

Topical hemostatic agents in the management of upper gastrointestinal bleeding: a meta-analysis

Authors
Ali A. Alali[1], Sarvee Moosavi[2], Myriam Martel[3], Majid Almadi[4], Alan N. Barkun[5]

A total of 59 studies with a total of 3,417 patients were included in the analysis.

	No. studies	No. patients	Proportion (95 % CI)	*P* value for heterogeneity	I^2
Primary outcome					
Immediate hemostasis (overall UGIB)	59	2919	0.93 (0.91; 0.94)	<0.01	67 %
Overall rebleeding	58	2696	0.18 (0.15; 0.21)	<0.01	69 %
Rebleeding 7 days	42	1943	0.17 (0.14; 0.20)	<0.01	55 %
Rebleeding 30 days	34	1692	0.21 (0.17; 0.26)	<0.01	75 %
Secondary outcome					
Overall mortality	45	2245	0.15 (0.12; 0.19)	<0.01	64 %
Bleeding-related mortality	34	1563	0.05 (0.04; 0.07)	0.42	3 %
Technical success	52	2392	0.97 (0.96; 0.98)	0.99	0 %
Adverse events	45	2111	0.02 (0.01; 0.03)	0.99	0 %

- **Immediate hemostasis was achieved in 93 %** (91 %; 94 %), with similar results according to etiology (NVUGIB vs. variceal), topical agent used, or treatment strategy (primary vs. rescue).
- The **overall rebleeding rate was 18 %** (15%; 21 %) with the majority of rebleeds occurring in the first 7 days.

Gastric Cancer (2013) 16:397–403
DOI 10.1007/s10120-012-0200-3

ORIGINAL ARTICLE

The successful endoscopic hemostasis factors in bleeding from advanced gastric cancer

Kang Hun Koh · Kang Kim · Dae Hun Kwon · Bum Su Chung · Ji Youn Sohn · Dae Seon Ahn · Byung Jun Jeon · Seong Hun Kim · In Hee Kim · Sang Wook Kim · Seung Ok Lee · Soo Teik Lee · Dae Ghon Kim

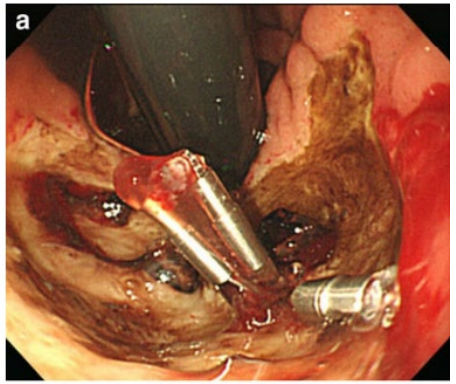
45 pts divided into:

- 14 patients who had experienced successful endoscopic hemostasis
- 31 patients who had had unsuccessful hemostasis with the first endoscopy and then **underwent embolization (TAE)**

	Group 1 Endoscopic hemostasis success group ($n = 14$)	Group 2 Endoscopic hemostasis failure group ($n = 31$)	P value
Age (years, mean ± SD)	68.07 ± 11.69	67.35 ± 16.59	0.206
Sex (M:F)	10:4	21:10	0.547
PT (INR) (mean ± SD)	0.57 ± 0.51	0.52 ± 0.51	0.493
PLT (×1,000 U/ml, mean ± SD)	244.71 ± 129.82	151.39 ± 77.68	0.357
SBP (mmHg, mean ± SD)	110.00 ± 29.08	102.26 ± 22.76	0.650
DBP (mmHg, mean ± SD)	68.57 ± 12.92	65.48 ± 12.61	0.572
Hgb (g/dL, mean ± SD)	9.08 ± 1.87	7.83 ± 2.29	0.267
RBC transfusion (U, mean ± SD)	2.29 ± 0.99	2.42 ± 1.03	0.976
NSAID use, n (%)	6 (42.9)	5 (16.1)	0.062
Location of tumor (GC/LC/AW/PW), n	(0, 4, 3, 7)	(7, 9, 3, 12)	0.217
Lesion size (>2 cm), n (%)	9 (64)	29 (93.5)	0.023*
Bleeding condition (Forrest class 1 a/b), n	(10, 4)	(10, 21)	0.017*
Survival rate, n (%)	14 (100)	23 (74.2)	0.037*

Table 3 Multivariate logistic regression analysis of predictive factors for endoscopic hemostasis failure

	P value	Odds ratio	95 % CI
PT (INR)	0.555	0.533	0.66–4.299
PLT (×1,000 U/ml)	0.059	0.987	0.973–1.001
Hgb (g/dL)	0.072	0.634	0.385–1.042
NSAID use	0.333	0.304	0.027–3.387
Lesion size (>2 cm)	0.023*	8.056	1.329–48.846
Bleeding condition (Forrest class 1 a/b)	0.406	2.552	0.280–23.274



Lesion size and bleeding condition of Forrest class 1a or 1b were statistically significant predictive factors for endoscopic hemostatic failure (P = 0.023 and P = 0.017, respectively).

Gastric Cancer (2013) 16:397–403
DOI 10.1007/s10120-012-0200-3

ORIGINAL ARTICLE

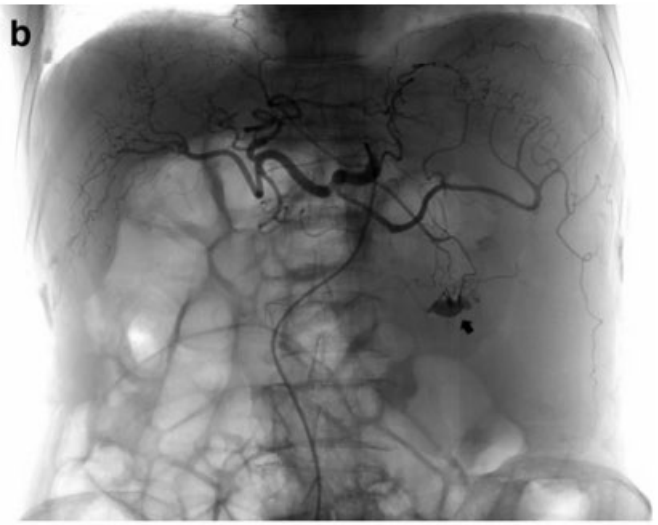
The successful endoscopic hemostasis factors in bleeding from advanced gastric cancer

Kang Hun Koh · Kang Kim · Dae Hun Kwon · Bum Su Chung · Ji Youn Sohn · Dae Seon Ahn · Byung Jun Jeon · Seong Hun Kim · In Hee Kim · Sang Wook Kim · Seung Ok Lee · Soo Teik Lee · Dae Ghon Kim

- Small bleeding lesions (<2 cm) and exposed vessels in the bleeding site with gastric cancer indicated that **endoscopic hemostasis would be an effective hemostatic modality** to choose.
- While,**the presence of large bleeding lesions (>2 cm) and non-exposed vessel** bleeding, endoscopic hemostasis failure is predicted, and **TAE could be recommended.**

Table 4 Vessel selected for embolization in TAE patients

Selected vessel	Group 2; Endoscopic hemostasis failure group ($n = 31$)
Left gastric artery (LGA)	16
Right gastric artery (RGA)	6
LGA + RGA	3
More than two arteries excluding LGA and RGA	6



What about Radiotherapy??

A Nationwide Survey in Japan of Palliative Radiotherapy for Bleeding in Gastrointestinal and Genitourinary Tumor Patients

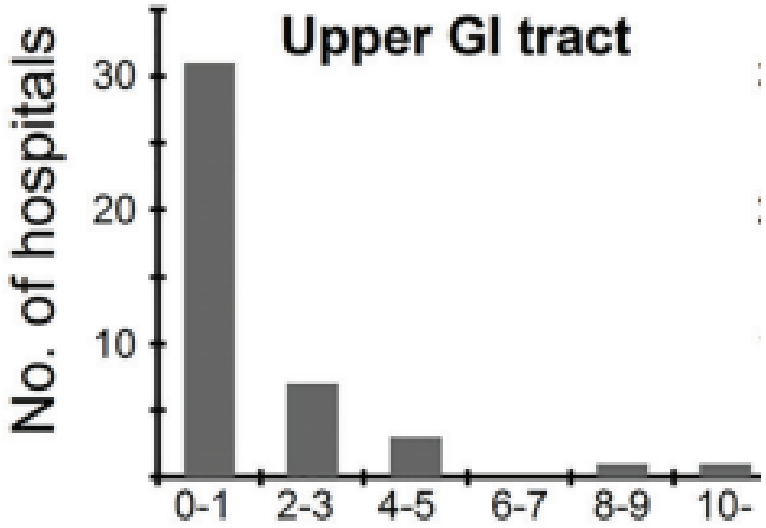
Takashi Kosugi[a, j], Naoto Shikama[b], Tetsuo Saito[c], Naoki Nakamura[d], Ayako Nakura[a], Hideyuki Harada[e], Hitoshi Wada[f], Miwako Nozaki[g], Nobue Uchida[h], Katsumasa Nakamura[i]

World J Oncol. 2016

A survey was conducted by the palliative radiotherapy working group of the Japanese Radiation Oncology Study Group (JROSG), focusing on **annual cases of radiotherapy for tumors of the upper and lower gastrointestinal tracts** and applicable fractionated doses for three hypothetical patients.

.

54 radiation oncologists at 43 facilities answered. Most of the them reported that they conducted hemostatic irradiation **for less than one patient per year**, though the median annual number of patients treated with radiotherapy in these facilities was 594.



What about Radiotherapy??

Yu *et al. BMC Cancer* (2021) 21:413
https://doi.org/10.1186/s12885-021-08145-4

BMC Cancer

RESEARCH ARTICLE Open Access

Role of palliative radiotherapy in bleeding control in patients with unresectable advanced gastric cancer

Jesang Yu[1], Jinhong Jung[1], Sook Ryun Park[2], Min-Hee Ryu[2], Jin-hong Park[1], Jong Hoon Kim[1] and Sang Min Yoon[1*]

61 pts treated with RT palliative for bleeding tumour.

- ✓ Bleeding control was achieved in 54 (**88.5%**) patients
- ✓ Among the 54 patients who achieved bleeding control, 19 (**35.2%) experienced re-bleeding** during the follow-up period.

The median time to re-bleeding was 6.0 months.

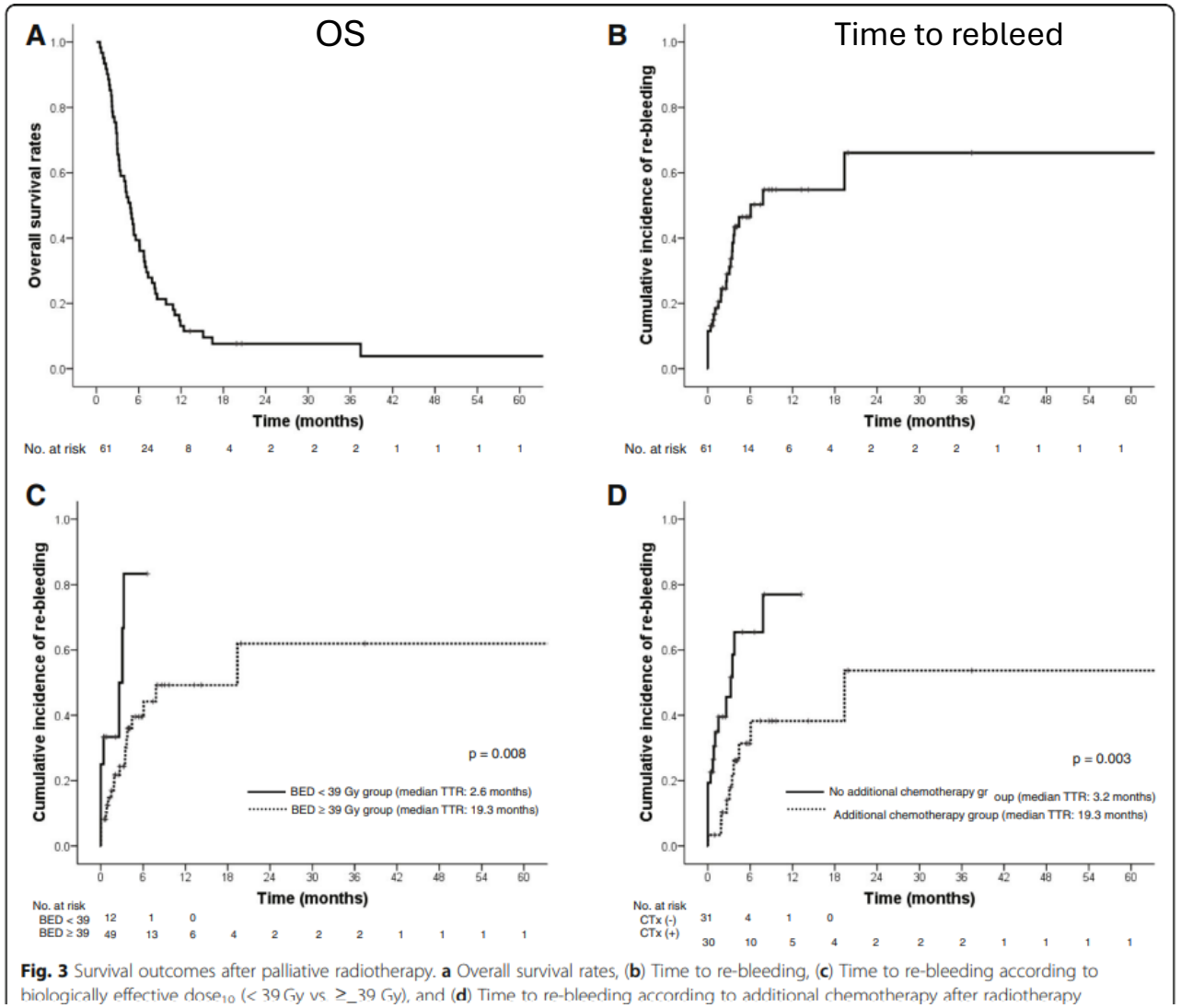


Fig. 3 Survival outcomes after palliative radiotherapy. **a** Overall survival rates, (**b**) Time to re-bleeding, (**c**) Time to re-bleeding according to biologically effective dose$_{10}$ (< 39 Gy vs. ≥ 39 Gy), and (**d**) Time to re-bleeding according to additional chemotherapy after radiotherapy

What about Radiotherapy??

Yu et al. BMC Cancer (2021) 21:413
https://doi.org/10.1186/s12885-021-08145-4

BMC Cancer

RESEARCH ARTICLE Open Access

Role of palliative radiotherapy in bleeding control in patients with unresectable advanced gastric cancer

Jesang Yu[1], Jinhong Jung[1], Sook Ryun Park[2], Min-Hee Ryu[2], Jin-hong Park[1], Jong Hoon Kim[1] and Sang Min Yoon[1*]

Multivariate analysis demonstrated that a **higher radiation dose** (p = 0.007) and **additional chemotherapy after radiotherapy** (p = 0.004) were **significant factors for prolonging the time to re-bleeding**

Table 2 Prognostic factors for the time to re-bleeding

Variables	Univariate analysis		Multivariate analysis	
	Hazard ratio (95% CI)	*p* value	Hazard ratio (95% CI)	*p* value
Age	0.977 (0.948–1.007)	0.129		
ECOG performance status (< 2)	1.599 (0.669–3.820)	0.291		
Hematemesis (no)	1.544 (0.679–3.509)	0.300		
Hemostasis interventions before radiotherapy (no)	1.542 (0.678–3.504)	0.301		
Baseline hemoglobin level	1.052 (0.824–1.342)	0.684		
Amount of transfusion before radiotherapy	1.020 (0.973–1.070)	0.409		
Biologically effective dose	0.919 (0.875–0.966)	0.001	0.871 (0.788–0.963)	0.007
Additional chemotherapy after radiotherapy (no)	0.303 (0.132–0.697)	0.005	0.276 (0.114–0.670)	0.004

CI Confidence interval; *ECOG* Eastern Cooperative Oncology Group
Values in parentheses were set as the reference.

...should we talk about surgery?

World Journal of Gastroenterology

Submit a Manuscript: http://www.wjgnet.com/esps/
Help Desk: http://www.wjgnet.com/esps/helpdesk.aspx
DOI: 10.3748/wjg.v21.i47.13316

World J Gastroenterol 2015 December 21; 21(47): 13316-13324
ISSN 1007-9327 (print) ISSN 2219-2840 (online)

ORIGINAL ARTICLE

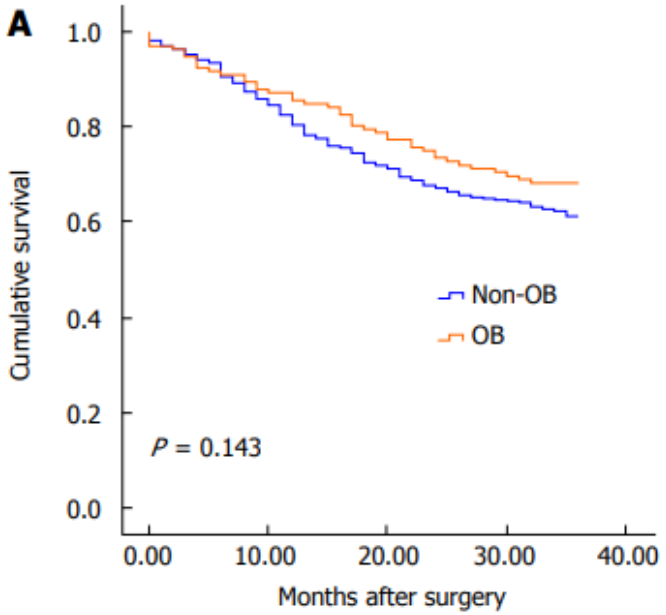
Retrospective Study

Long-term outcomes after radical gastrectomy in gastric cancer patients with overt bleeding

	OB	Non-OB	*P* value
All			0.541
Resectable	141 (20.3)	554 (79.7)	
Unresectable	54 (22.1)	190 (77.9)	
Upper			0.136
Resectable	41 (22.9)	138 (77.1)	
Unresectable	14 (15.2)	78 (84.8)	
Middle			0.887
Resectable	17 (24.3)	53 (75.7)	
Unresectable	9 (23.1)	30 (76.9)	
Lower			0.038[a]
Resectable	83 (18.6)	363 (81.4)	
Unresectable	31 (27.4)	82 (72.6)	

NO significant difference in the percentage of OB patients between resectable cases and unresectable cases (20.3% vs 22.1%, P = 0.541).

- 695 (74.0%) were hospitalized for potential radical gastrectomy. Of these:
- **132 bleeding pts:** 128 achieved hemostasis + elective surgery and 4 failed hemostasis→ emergency surgery
- **521 pts without bleeding**



NO significant difference in 3-year OS rate (68.2% vs 61.2%, P = 0.143) or clinicopathological characteristics (P > 0.05) between these patients with and without OB

World Journal of Gastroenterology

Submit a Manuscript: http://www.wjgnet.com/esps/
Help Desk: http://www.wjgnet.com/esps/helpdesk.aspx
DOI: 10.3748/wjg.v21.i47.13316

World J Gastroenterol 2015 December 21; 21(47): 13316-13324
ISSN 1007-9327 (print) ISSN 2219-2840 (online)

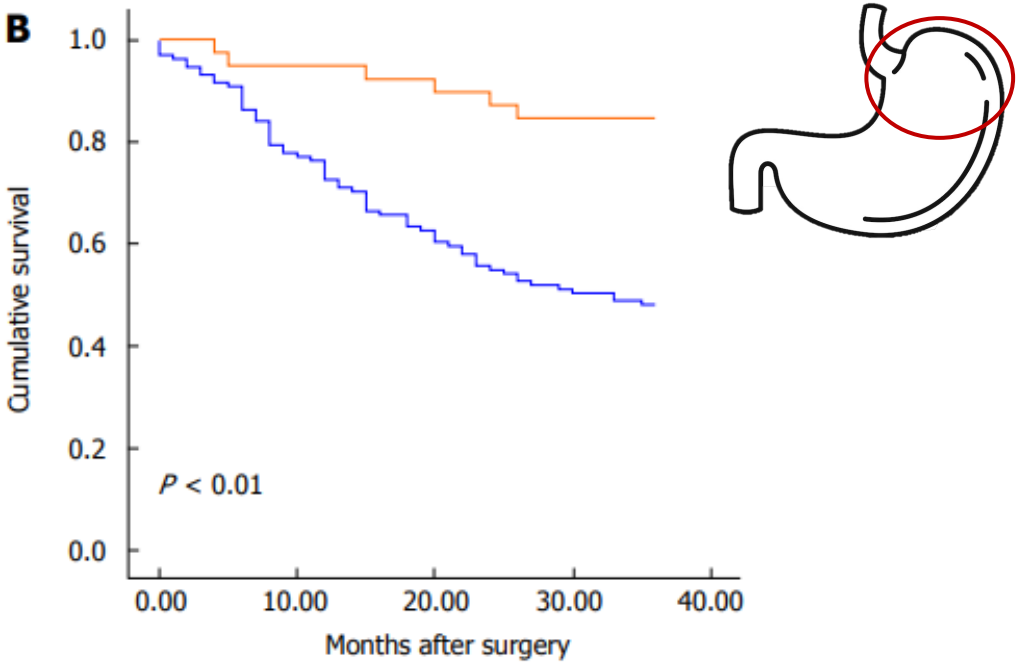
ORIGINAL ARTICLE

Retrospective Study

Long-term outcomes after radical gastrectomy in gastric cancer patients with overt bleeding

	Upper gastric cancer		
	Non-OB	OB	*P* value
Gender[1]			0.996
Male	94 (71.8)	28 (71.8)	
Female	37 (28.2)	11 (28.2)	
Age[2]	64.8 ± 10.6	62 ± 12.8	0.276
AJCC stage[1]			0.017[a]
Ⅰ-Ⅱ	46 (35.1)	22 (56.4)	
Ⅲ-Ⅳ	85 (64.9)	17 (43.6)	
T category[1]			0.010[a]
T1-T2	17 (13)	12 (30.8)	
T3-T4	114 (87)	27 (69.2)	

- Subgroup analysis based on tumor location showed that the **3-year OS rate of upper gastric cancer was significantly higher in patients with OB (84.6%) than in those without OB** (48.1%, P < 0.01) and
- AJCC stages Ⅰ-Ⅱ (56.4% vs 35.1%, P = 0.017) and T1-T2 category tumors (30.8% vs 13%, P = 0.010) were **more frequent in patients with OB** than in those without OB



…when should we think about surgery?

In case of resectable GC, after control of bleeding

↓

Multidisciplinary discussion

↓

Upfront surgery with adequate lymphadenectomy and curative intent or neoadjuvant chemotherapy, based on tumor stage

BLEEDING GASTRIC CANCER

Patient's **hemodynamic stabilization** (fluid, trasfusion, eventually amine support...)

Think about **emergency (palliative) surgery** only in **rare** cases of unsuccessful hemostasis

Endoscopic evaluation: assess the risk and treat the bleeding

In case of failure of endoscopic therapy or rebleeding → **Embolization**

Hemodynamic stability and treatment of bleeding: **neoadjuvant chemotherapy** or **upfront surgery** according to tumour stage

Palliative short-course **radiotherapy** in case of unresectable/metastatic GC

GRAZIE PER L'ATTENZIONE